Appl. No.: 10/825,871
Amdt. dated February 17, 2006
Reply to Office Action of November 22, 2005

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 8. (Cancelled)

9.   (Currently Amended): A method for providing a ~~continuous~~ continuously variable clean dry air (CDA) flow ~~of air~~ in a semiconductor processor for substrate processing, comprising the steps of:

    sensing ~~selected~~ temperature ~~points of~~ measurements at selected points;

    proportionally adjusting a continuously variable CDA flow based upon the sensed temperature measurements ~~maintaining an air flow proportional to a range of temperatures at selected temperature points~~; and

    maintaining a predefined ~~selected~~ temperature inside a dome of the semiconductor processor during the time that the processor is processing substrates and when substrate processing is idle.

10.   (Currently Amended): The method ~~for providing uniform temperature gradients in a semiconductor processor for substrate processing in~~ of Claim 9 further comprising the steps of: maintaining a supply of heat comprising the ~~air~~ continuously variable CDA flow at ~~a~~ the predefined temperature.

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11.   (Currently Amended): The method ~~for providing uniform temperature gradients in a semiconductor processor for substrate processing in~~ of Claim 9 further comprising the steps of: utilizing a heat exchanger to regulate the amount of heat provided to a chamber surface of the semiconductor processor.

12.   (Currently Amended): The method ~~for providing uniform temperature gradients in a semiconductor processor for substrate processing in~~ of Claim 9 further comprising the steps of: utilizing one or more temperature sensors and a <u>CDA</u> flow controller for ~~allowing~~ <u>controlling</u> upward and downward fluctuations <u>from</u> ~~in~~ the <u>predefined</u> temperature of ~~a~~ <u>the</u> dome of the semiconductor processor.

13.   (Currently Amended): The method ~~for providing uniform temperature gradients in a semiconductor processor for substrate processing in~~ of Claim 9 further comprising the steps of: utilizing one or more temperature sensors and a <u>CDA</u> flow controller for ~~allowing~~ <u>controlling</u> upward and downward fluctuations in the heat provided to ~~a~~ <u>the</u> dome of the semiconductor processor.

14.   (Currently Amended): The method ~~for providing heat to a semiconductor processor for substrate processing in~~ of Claim 9 further comprising the steps of: maintaining a supply of air comprising the <u>continuously variable CDA</u> ~~air~~ flow at a predefined quantity of heat provided to ~~a~~ <u>the</u> dome of the semiconductor processor.

15.   (Currently Amended): A method for semiconductor processing, comprising the steps of:

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providing a domed process chamber having a support, a process gas distributor, and an

exhaust; and

continuously varying an a clean dry air (CDA) flow responsive to temperatures changes

in the domed process chamber, such that a dome temperature is stabilized in accordance with a

preset temperature during a semiconductor manufacturing process.

16.   (Previously Presented): The method of Claim 15, further comprising:

driving an antenna of a plasma reactor chamber by RF energy inductively coupled inside

the domed process chamber.

17.   (Previously Presented): The method of Claim 16, further comprising:

generating a low energy plasma by the antenna for etching metals, dielectrics and

semiconductor materials.

18.   (Previously Presented): The method of Claim 16 further comprising:

applying an auxiliary RF bias energy to a wafer support cathode to control a cathode

sheath voltage and the ion energy independent of a plasma density in the plasma reactor

chamber.

19.   (Previously Presented): The method of Claim 15 further comprising:

idling the semiconductor manufacturing process.

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